

## Future Developments

### Seeking Information about Wheelchair Evaluation: A Call for Action

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When seeking evaluative information for our common consumer purchases, we rely on direct experience, advertising, sales pitches, or published consumer's buying guides. Will that work when selecting wheelchairs? If you rely solely on your own experience, you will probably continue to prescribe the same wheelchair brands and types you have been using. If you depend on your local supplier for advice, you can expand your options only as fast as he expands his product line. However, if you seek objective information from published, formal wheelchair evaluations—you will either have to wait or become an activist—because such information is not well organized in this country. At present, there is no single national center for wheelchair evaluation in the United States.

Wheelchair manufacturers do conduct evaluations of their own products (and prospective imports) in order to find out about product safety, service life, and market acceptability and some of the information they gather could be useful for prescription purposes. However, it is proprietary and not available to purchasers or prescribers. Also, they usually work through selected dealers and with clinicians who volunteer information.

On the other hand, if the information were to come directly from the supplier, or even from the clinician working with a specific supplier, objectivity of the source might be questioned.

In the U.S., the champion of objective evaluation for products used in health care is the U.S. Food and Drug Administration (FDA). Its job is to protect the consumer of a medical product from injury or disease that might result from the use of the product. In the mid-1970s, the FDA recruited a panel of experts to put together a list of rehabilitation devices and to classify each product according to its suspected potential for causing injury. Wheelchairs were assigned to one of five groups and each group was assigned one of three classifications (1). The only type of wheelchair that was classed as high risk (Class III, Premarket Approval) was the type that climbs stairs. The very fact that the product will be used on stairs, therefore susceptible to falling, is substantial argument for inferring a high potential risk of user injury. Of the other four types of wheelchairs, only the prescription-based powered wheelchair seemed, to the classifying panel, to have presented safety risks, such as loss of operator control, electric shock, and exposure to battery acids. Such risks were, however, deemed amenable to reduction through the judicious development and application of performance standards. But the FDA has not been developing standards, preferring instead to encourage and support the development of such standards by groups of experts in the field. In the case of wheelchairs, that unfinished work has been ongoing for several years under the sanction of

the American National Standards Institute (ANSI) and RESNA. Their efforts are nearing completion and are reported in this publication.

After reviewing the standards, the search for objective evaluations of wheelchairs will take you to local suppliers to see which chairs are available in your area. If you feel the selection is at all limited, ask the suppliers why they do not carry certain other brands. Then check with other clinicians, either in your own area or through your professional society, to see if they would be interested in forming an evaluation committee. Awareness of need creates demand for satisfaction. Also, search the technical journals for articles that report on wheelchair applications for special cases or populations.

If you are an activist, or are thinking that you should become one, you may want to initiate some evaluation activity through the local chapter of your professional organization, or on a national basis. You will not be plowing unbroken ground, since exemplary information and techniques are reported in a few special publications, and new research and demonstration programs are available. Special workshops focusing on wheelchairs were conducted by Moss Rehabilitation Hospital in the late 70s. "Wheelchair I" and "Wheelchair II" (2,3), identified many of the clinical and user experiences that were available at that time. Even though the data are now outdated, it is easy to see that the identification of problem areas led to initiating research and standards development which has spun off improvements in wheelchair design and performance. A similar workshop, "Wheelchair III" was conducted by the VA Rehabilitation Research and Development Service in 1982, and had similar beneficial effects on the development of improved powered wheelchairs (4).

Laboratory testing and qualification of wheelchairs is now beginning. Methods for objectively gathering and presenting experiences of active wheelchair users still need development. Perhaps the independent living centers can work on developing a user-experience network similar to the parochial data-gathering effort that was active at the Center for Independent Living in Berkeley during the mid-1970s (5).

Whether the evaluative data we seek is technical, clinical, or user-experience based, the fact

remains that there is no central place for that information to be stored and shared. Although it is too early to report on its format or relative success, there is promise of the development of such a source for wheelchairs, as well as other products, for use in rehabilitation. The National Institute on Disability and Rehabilitation Research has awarded a five-year cooperative agreement to the National Rehabilitation Hospital, Washington, D.C., to establish such a data-gathering and reporting resource. The Rehabilitation Engineering Center for "Evaluation of Rehabilitation Technology" will seek to collect information on methods, resources, and evaluation by researchers, clinicians, and users. A partnership with ECRI, a Pennsylvania company involved with testing and reporting on health care products, is designed to acquire evaluative data and disseminate it to people who need it.

The process of evaluation is under way, but the resources for conducting evaluations and getting the results to the rehabilitation professionals who need this information are still very limited. As you gain new insights into the variety and potential of new products, we hope you will join in the quest for establishing a way of gathering and sharing information to help in evaluating and selecting wheelchairs, as well as many other products intended to minimize disability.

## REFERENCES

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